SunLong Biotech Co.,LTD
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**[ Marker Primary Antibody ]**

# Rabbit Anti-Phospho-CaMKII (Thr286)/AF647 Conjugated antibody

**Catalog Number: SL1647R-AF647**

**FOR RESEARCH USE ONLY**

**[ DATASHEET ]**

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| **Host:** | Rabbit |
| **Isotype:** | IgG |
| **Clonality:** | Polyclonal |
| **Target:** | Anti-Phospho-CaMKII (Thr286)/AF647 |
| **Immunogen:** | KLH conjugated Synthesised phosphopeptide derived from human CaMK2 alpha around the phosphorylation site of Thr286 |
| **Purification:** | affinity purified by Protein A |
| **Concentration:** | 1mg/ml |
| **Storage:** | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |
| **Applications:** | not yet tested in other applications.<br>optimal dilutions/concentrations should be determined by the end user. |
| **Reactivity:** | Human,Rat(predicted:Mouse,Chicken,Rabbit,Sheep) |
| **Background:** | background: Ca2+/CalmodulinDependent Protein Kinase II (CaM Kinase II) is a multifunctional calcium and calmodulindependent protein kinase that mediates cellular responses to a wide variety of intercellular signals. CaM Kinase II has been shown to regulate diverse cellular functions including synaptic plasticity, neurotransmitter synthesis and release, gene expression, ion channel function, carbohydrate metabolism, cytoskeletal function, and Ca2+homeostasis. Phosphorylation of Thr286 on the kinase produces an autonomously active form of CaM Kinase II. Autophosphorylation of Thr305 inhibits the activity CaM Kinase II. Phosphorylation at this site appears to reduce the association of CaM Kinase II with the PSD and reduce LTP and learning.<br>**Function:** CaM-kinase II (CAMK2) is a prominent kinase in the central nervous system that may function in long-term potentiation and neurotransmitter release. Member of the NMDAR signaling complex in excitatory synapses it may regulate NMDAR-dependent potentiation of the |

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| | AMPAR and synaptic plasticity.<br>**Subunit:** CAMK2 is composed of four different chains: alpha, beta, gamma, and delta. The different isoforms assemble into homo- or heteromultimeric holoenzymes composed of 8 to 12 subunits. Interacts with BAALC, MPDZ, SYN1, CAMK2N2 and SYNGAP1.<br>**Subcellular Location:** Cell junction, synapse, presynaptic cell membrane. Cell junction, synapse. Note=Postsynaptic lipid rafts.<br>**Similarity:** Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. CaMK subfamily.<br>Contains 1 protein kinase domain.<br>**Database links:**<br>**Entrez Gene:** 282162 Cow<br>**Entrez Gene:** 525416 Cow<br>**Entrez Gene:** 530719 Cow<br>**Entrez Gene:** 532713 Cow<br>**Entrez Gene:** 815 Human<br>**Entrez Gene:** 816 Human<br>**Entrez Gene:** 817 Human<br>**Entrez Gene:** 818 Human<br>**Entrez Gene:** 108058 Mouse<br>**Entrez Gene:** 12322 Mouse<br>**Entrez Gene:** 12323 Mouse<br>**Entrez Gene:** 12325 Mouse<br>**Entrez Gene:** 171140 Rat<br>**Entrez Gene:** 24245 Rat<br>**Entrez Gene:** 24246 Rat<br>**Entrez Gene:** 25400 Rat<br>Omim: 114078 Human<br>**SwissProt:** Q2HJF7 Cow<br>**SwissProt:** Q3MHJ9 Cow<br>**SwissProt:** Q13554 Human<br>**SwissProt:** Q13555 Human<br>**SwissProt:** Q13557 Human<br>**SwissProt:** Q9UQM7 Human<br>**SwissProt:** P11798 Mouse<br>**SwissProt:** P28652 Mouse<br>**SwissProt:** Q6PHZ2 Mouse<br>**SwissProt:** Q923T9 Mouse<br>**SwissProt:** P08413 Rat<br>**SwissProt:** P11275 Rat |

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| | **SwissProt:** P11730 Rat<br>**SwissProt:** P15791 Rat<br>**Unigene:** 725992 Human<br>**Unigene:** 131530 Mouse<br>**Unigene:** 107499 Rat<br>Important<br>**Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |